AMENDMENTS TO THE CLAIMS:

Without prejudice, this listing of the claims replaces all prior versions and listings of the claims in the present application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for exchanging data between at least two stations connected to one another via a distributed bus system, the data being contained in messages sent by the at least two stations via the distributed bus system, the method comprising:

synchronizing a common global time base with an external reference time at a predefinable instant for the at least two stations of the distributed bus system by synchronizing, in the at least two stations of the distributed bus system, at a predefinable instant, the common global time base with the external reference time as a function of a correction value and the common global time base, wherein the synchronizing includes:

receiving from a source external to the bus system a time signal of the external reference time at at least one of the at least two stations,

based on a content of the time signal, determining, in the at least one of the at least two stations, the correction target value between a received time signal and the common global time base,

sending the correction target value to other ones of the at least two stations of the distributed bus system, and

determining the correction value in the at least two stations of the distributed bus system, as a function of the correction target value; and

providing the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

2. (Original) The method of claim 1, wherein a synchronization of the common global time base with the external reference time is triggerable by comparing the common global time base with the external reference time.

3. (Original) The method of claim 1, wherein the correction target value is sent to the other ones of the at least two stations periodically.

4. (Original) The method of claim 1, wherein the correction target value is sent to the other ones of the at least two stations if the correction target value is other than zero.

5. (Original) The method of claim 1, wherein the correction target value is sent to the other ones of the at least two stations upon a request by one of the other ones of the at least two stations.

6. (Original) The method of claim 1, wherein the correction target value is contained in a separate message sent to the other ones of the at least two stations of the distributed bus system.

7. (Original) The method of claim 1, wherein the correction target value is contained in a test message of the distributed bus system that is sent to the other ones of the at least two stations.

8. (Original) The method of claim 1, wherein the correction target value is contained in test data present in a data message of the distributed bus system that is sent to other ones of the at least two stations.

9. (Original) The method of claim 1, wherein the correction value is determined, in the at least two stations of the distributed bus system, using error correction as a function of the correction target value.

10. (Original) The method of claim 9, wherein the correction value is determined, in the at least two stations of the distributed bus system, using Byzantine error correction as a function of the correction target value.

11. (Original) The method of claim 1, wherein the common global time base is synchronized with the external reference time by adding the correction value to the common global time base.

12. (Original) The method of claim 1, wherein the common global time base is synchronized with the external reference time by multiplying the correction value by the common global time base.

13. (Original) The method of claim 1, wherein the predefinable instant for synchronizing the common global time base with the external reference time is explicitly predefined.

14. (Original) The method of claim 13, wherein synchronization of the common global time base with the external reference time is triggered by transmitting the correction value to a synchronization algorithm at an explicitly predefined instant.

15. (Currently Amended) A communication system having at least two stations and a distributed bus system via which the at least two stations are interconnected so that data can be exchanged between the at least two stations, the data being contained in messages that are sendable by the at least two stations via the distributed bus system, the communication system comprising:

a first arrangement to synchronize a common global time base with an external reference time at a predefinable instant for the at least two stations of the distributed bus system by synchronizing, in the at least two stations of the distributed bus system, at a predefinable instant, the common global time base with the external reference time as a function of a correction value and the common global time base, wherein the first arrangement to synchronize includes:

a receiving arrangement to receive from a source external to the bus system a time signal of the external reference time at at least one of the at least two stations,

a correction target value determining arrangement to determine based on a content of the time signal, in the at least one of the at least two stations, the correction target value between a received time signal and the common global time base,

a sending arrangement to send the correction target value to other ones of the at least two stations of the distributed bus system, and

a correction value determining arrangement to determine the correction value in the at least two stations of the distributed bus system, as a function of the correction target value; and

a second arrangement to provide the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

16. (Original) The communication system of claim 15, wherein a synchronization of the common global time base with the external reference time is triggerable by comparing the common global time base with the external reference time.

17. (Currently Amended) A distributed bus system for exchanging data between at least two stations of a communication system, the data being contained in messages sent by the at least two stations, the distributed bus system comprising:

an arrangement operable for use in performing the steps of:

synchronizing a common global time base with an external reference time at a predefinable instant for the at least two stations of the distributed bus system by synchronizing, in the at least two stations of the distributed bus system, at a predefinable instant, the common global time base with the external reference time as

a function of a correction value and the common global time base, wherein the synchronizing includes:

receiving from a source external to the bus system a time signal of the external reference time at at least one of the at least two stations,

based on a content of the time signal, determining, in the at least one of the at least two stations, the correction target value between a received time signal and the common global time base,

sending the correction target value to other ones of the at least two stations of the distributed bus system, and

determining the correction value in the at least two stations of the distributed bus system, as a function of the correction target value; and

providing the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

18. (Currently Amended) A memory arrangement for use with a station of at least two stations of a communication system, which is connected to at least one other station of the at least two stations via a distributed bus system to allow exchanging of data, the memory arrangement comprising:

a storing arrangement to store a computer program for running on a microprocessor of at least one of the at least two stations of a communication system connected to at least another one of the at least two stations via a distributed bus system to allow exchanging of data, the computer program being operable to exchange data between the at least two stations connected to one another via the distributed bus system, the data being contained in messages sent by the at least two stations via the distributed bus system, by performing the steps of:

synchronizing a common global time base with an external reference time at a predefinable instant for the at least two stations of the distributed bus system by synchronizing, in the at least two stations of the distributed bus system, at a predefinable instant, the common global time base with the external reference time as a function of a correction value and the common global time base, wherein the step of synchronizing includes:

receiving from a source external to the bus system a time signal of the external reference time at at least one of the at least two stations,

based on a content of the time signal, determining, in the at least one of the at least two stations, the correction target value between a received time signal and the common global time base,

sending the correction target value to other ones of the at least two stations of the distributed bus system, and

determining the correction value in the at least two stations of the distributed bus system, as a function of the correction target value; and

providing the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

19. (Currently Amended) A computer program for running on a microprocessor of at least one of the at least two stations of a communication system connected to at least another one of the at least two stations via a distributed bus system to allow exchanging of data, the computer program being operable to perform a method for exchanging data between the at least two stations connected to one another via the distributed bus system, the data being contained in messages sent by the at least two stations via the distributed bus system, the method comprising:

synchronizing a common global time base with an external reference time at a predefinable instant for the at least two stations of the distributed bus system by synchronizing, in the at least two stations of the distributed bus system, at a predefinable instant, the common global time base with the external reference time as a function of a correction value and the common global time base, wherein the synchronizing includes:

receiving from a source external to the bus system a time signal of the external reference time at at least one of the at least two stations,

based on a content of the time signal, determining, in the at least one of the at least two stations, the correction target value between a received time signal and the common global time base,

sending the correction target value to other ones of the at least two stations of the distributed bus system, and

determining the correction value in the at least two stations of the distributed bus system, as a function of the correction target value; and

providing the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

20. (Original) The computer program of claim 19, wherein the computer program is stored in a memory element.

21. (Original) The computer program of claim 19, wherein the computer program is stored in a flash memory.

22. (Original) The communication system of claim 16, wherein the correction target value is sent to the other ones of the at least two stations periodically.

23. (Original) The communication system of claim 16, wherein the correction target value is sent to the other ones of the at least two stations if the correction target value is other than zero.

24. (Original) The communication system of claim 16, wherein the correction target value is sent to the other ones of the at least two stations upon a request by one of the other ones of the at least two stations.

25. (Original) The communication system of claim 16, wherein the correction target value is contained in a separate message sent to the other ones of the at least two stations of the distributed bus system.

26. (Original) The communication system of claim 16, wherein the correction target value is contained in a test message of the distributed bus system that is sent to the other ones of the at least two stations.

27. (Original) The communication system of claim 16, wherein the correction target value is contained in test data present in a data message of the distributed bus system that is sent to other ones of the at least two stations.

28. (Original) The communication system of claim 16, wherein the correction value is determined, in the at least two stations of the distributed bus system, using error correction as a function of the correction target value.

29. (Original) The communication system of claim 28, wherein the correction value is determined, in the at least two stations of the distributed bus system, using Byzantine error correction as a function of the correction target value.

30. (Original) The communication system of claim 16, wherein the common global time base is synchronized with the external reference time by adding the correction value to the common global time base.

31. (Original) The communication system of claim 16, wherein the common global time base is synchronized with the external reference time by multiplying the correction value by the common global time base.

32. (Original) The communication system of claim 16, wherein the predefinable instant for synchronizing the common global time base with the external reference time is explicitly predefined.

33. (Original) The communication system of claim 32, wherein synchronization of the common global time base with the external reference time is triggered by transmitting the correction value to a synchronization algorithm at an explicitly predefined instant.

34. (Original) The memory arrangement of claim 18, wherein the memory arrangement includes one of a read-only memory, a random-access memory and a flash memory.